

June 24, 2020

Vince Mammano Division Administrator Federal Highway Administration – California Division 650 Capitol Mall, Suite 4-100 Sacramento, CA 95814

SUBJECT: Buy America Waiver Request Contract 2016-B-01, Golden Gate Bridge Physical Suicide Deterrent System and Wind Retrofit Project Federal Aid Project Nos. BHLS-6003(051) (the subject of this waiver) and BHLS-6003(052)

Dear Mr. Mammano:

The Golden Gate Bridge, Highway & Transportation District (District) is submitting a Buy America waiver request in accordance with 23 CFR 635.410 to permit the use of steel or iron products not manufactured in the Unites States in connection with Contract 2016-B-01, Golden Gate Bridge Physical Suicide Deterrent System and Wind Retrofit Project (Contract). Specifically, and as further set forth below, the District is requesting a waiver related to the Golden Gate Bridge Physical Suicide Deterrent System Project (Project) for manufactured products that are part of the mechanical drive systems, electrical control systems, and scissor lifts for the Golden Gate Bridge Suspension Bridge replacement maintenance traveler system. The District believes it is eligible for a waiver of the Buy America requirements for this specific Project on the basis of non-availability of comparable products that comply with the Buy America provisions. Please note that although the Contract encompasses both the Project and the Golden Gate Bridge Wind Retrofit Project, there is no waiver being sought for the Wind Retrofit Project.

A. Project Identification:

Golden Gate Bridge Physical Suicide Deterrent System Federal Aid Project No. BHLS-6003(051).

B. Background

The 1.7 mile long Golden Gate Bridge links the City and County of San Francisco and the San Francisco Peninsula, which are the commercial and financial centers of Northern California, with the counties to the north of the Bridge. The Suspension Bridge spans over the Golden Gate Strait, which is an entry to the San Francisco Bay and an important navigation channel for commercial ships coming to and leaving the Port of Oakland, which is one of the busiest commercial ports in the US.

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In addition to being an important transportation facility, the Golden Gate Bridge is one of the most recognized structures in the world and a symbol of American ingenuity. Located within the Golden Gate National Recreation Area, the Bridge draws over 10 million visitors a year. On busy weekends, over 10,000 pedestrians and 6,000 bicyclists may cross on the Bridge's two sidewalks. Unfortunately, not all visitors to the Golden Gate Bridge come to enjoy the structure and setting. On average, 30 people die from suicide at the Golden Gate Bridge each year. Hundreds more are stopped from harming themselves through the efforts of the Golden Gate Bridge District Patrol, California Highway Patrol, other law enforcement, and citizen intervention. The District ultimately determined that a physical barrier was needed to stop this tragedy.

The Project involves the construction of a horizontal stainless steel net supported by cantilevered steel net supports for the full length of the Bridge, except that a tall vertical railing will be installed at the North Anchorage Housing. The Project also includes the replacement of the Suspension Bridge maintenance travelers with new travelers because the installation of the horizontal net at the Suspension Bridge will block the movement of the existing travelers.

Project Cost: This is an FHWA-funded project, with the current construction contract amount of \$132,577,866.

Traveler Access System. There is an existing maintenance traveler system located on the Suspension Bridge, which consists of an interior traveler and a combined side and bottom traveler in each of the four spans of the Suspension Bridge. The travelers are supported by steel rails and trolley beams connected to the Suspension Bridge. A diesel powered motor and truck system moves the existing maintenance travelers along the rails and trolley beams to allow inspectors and workers to access and inspect the different bridge elements when performing mandatory bridge inspections and to perform maintenance operations.

As noted above, the Project includes the construction of a horizontal stainless steel net supported by cantilevered steel net supports along the west and east sides of the Golden Gate Bridge. The new cantilevered steel net supports are connected to the Bridge structure approximately every 50feet, are located approximately 20-feet below the Bridge sidewalks and extend approximately 23feet away from the edge of the Bridge. After the new net supports are installed in the Suspension Spans, they will obstruct the existing maintenance traveler's path of travel causing the travelers to be unusable. A new replacement traveler access system is necessary in order to be able to continue performing mandatory inspections and routine maintenance operations after the Suicide Deterrent System is constructed.

Similar to the existing maintenance travelers, there are four different maintenance travelers in each of the four spans of the Suspension Bridge, consisting of an interior traveler, a bottom traveler and two independent side travelers. The interior travelers are located inside the Suspension Bridge stiffening trusses above the bottom laterals. The bottom travelers are located below the Suspension Bridge stiffening trusses bottom lateral system and the new cantilevered steel net supports. The side travelers are located on the east and west sides of the Suspension Bridge stiffening truss and above the new cantilevered steel net supports (see Figure 1). Each of these three different maintenance traveler types consist of a steel truss structural frame, a mechanical drive system, and

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an electric control system to power the mechanical drive system and propel the travelers (see Figures 2 to 4). In addition, the bottom and interior travelers must be equipped with scissor lifts that are necessary to reach upper areas of the stiffening truss serviced by these travelers.



Figure 1. Plans of Suspension Bridge Proposed Travelers and Cantilevered Net Supports



Figure 2. 3D View of Proposed Interior Traveler

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Figure 3. 3D View of Proposed Bottom Traveler



Figure 4. 3D View of Proposed Side Traveler

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C. Justification for Waiver Request:

The construction Contract specifies that the Project is partially funded with federal funds and that the FHWA Buy America provisions apply.

The Contract drawings include the complete design of the structural frame for the interior, bottom and side travelers. The entire structural steel frame for each traveler will be fabricated from domestic steel and iron products.

The Contract requires the Contractor to engage companies with expertise in the fabrication of moveable bridge maintenance access systems, which is necessary to develop the design and integration of these systems, to assure their viability and guarantee their performance.

The Contract also specifies performance criteria for the traveler mechanical drive and electric control systems, and scissor lifts.

In order to span under the Bridge stiffening truss and provide required access to the truss bottom chords and the members of the bottom lateral system, the bottom travelers must be approximately 100 feet long and 8 feet wide. The interior travelers must be of the similar size to provide access to the floor beams and the top lateral bracing. Because of the required size, the bottom and interior traveler weights are in excess of 100,000 pounds. The side travelers are approximately 40 feet long and 25 feet tall, and weigh approximately 41,000 pounds.

The vertical curvature of the stiffening truss will require the travelers to be able move on an up and down slope of up to 3%. Considering this, the travelers cannot be manually moved with winches and rollers but must have a substantial motor driven propulsion system. In addition, the Bridge is located in an extremely harsh marine environment of the Pacific Ocean, which requires the traveler mechanical and control parts to be highly durable to reliably operate in such environment.

The Contractor developed its design for traveler mechanical drive systems, electric control systems and scissor lifts according to the Contract's specific performance criteria. During the design period, the Contractor determined that certain products primarily made of steel, which are necessary to meet the design criteria, are not made domestically or they are made in the United States but cannot be certified as meeting the Buy America criteria because the supply chains for some parts of these products are foreign. The District and its consultants have also investigated the availability of the products and determined that there are no manufacturers that produce Buy America compliant products for certain steel products that are part of the mechanical drive systems, electrical control systems, and scissor lifts for the Golden Gate Bridge Suspension Bridge replacement maintenance traveler system. Products for which a waiver from the Buy America requirements is being sought are as follows:

- 1. Electric motors
- 2. Speed reducers
- 3. Wheel chocks

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- 4. Chain stopper
- 5. Rail clamps with hydraulic power units
- 6. Pneumatic brakes
- 7. Air compressors
- 8. Gas cylinder stands
- 9. Bearings:
 - a. Tapered adapter four bolt pillow block
 - b. Pillow block unit setscrew locking
 - c. Tapered roller bearings (tapered double outer)
 - d. Sheave bearing 2 rows full complement bearings
 - e. Tapered adapter four bolt square flange block
 - f. Spherical plain bearings
 - g. Bushings
 - h. Radial Ball Bearing Double Seal (Maximum Capacity)
- 10. Electric cabinet switch handles
- 11. Shafts for electric cabinet switch handles
- 12. Grounding shoe
- 13. Scissor lifts

The following is a description of the above listed products for which a waiver from the Buy America requirements is being sought.

1. Electric motors

To propel the travelers along the Suspension Bridge, electric motors are required to power the drive wheels. Additionally, the telescoping retractable platforms of the Interior Travelers also require electric motors. The horse power (HP) requirements for the motors are:

- i. 3HP for the Side Travelers
- ii. 5HP for the Bottom Travelers
- iii. 5HP for the Interior Travelers (shown right)
- iv. 1HP for the Interior Traveler telescoping platforms



The motors consist of, in general, electrical windings on a steel shaft

which is in turn supported by bearings integrated within a cast iron housing. Electric motors of the traveler propulsion system must meet the slope, weight, clearance and corrosive environmental constraints of the Project by providing sufficient HP, size and durability. It was determined that vector heavy duty motors having a totally-enclosed design, with suitable torque requirements, and meeting IEEE 841 Severe Duty requirements are necessary for reliable operation. No manufacturers were found that were able to supply Buy America compliant electric motors capable of satisfying these requirements. The proposed electric motor manufacturer is Toshiba, which manufactures the motors in the United States and Japan.

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2. Speed Reducers

Speed reducers reduce the relatively high number of revolutions per minute (rpm) produced by the electric motors to an rpm that is compatible with the drive speeds and torque necessitated by the travelers. They are similar in concept to a single speed gearbox. Speed reducers consist of precision machined parts made from steel such as eccentric cams, gear rings, rollers and drive shafts that are mounted to the housings via integrated bearings. An exploded view of a reducer is shown to the right.



The cycloidal speed reducers of the traveler propulsion system must be compatible with the electric motors to meet the slope, weight, clearance and environmental constraints of this project. No manufacturers were found that were able to supply Buy America compliant speed reducers able to meet these requirements. The proposed speed reducer manufacturer is Sumitomo, which manufactures the speed reducers in Japan and China.

When the travelers are not in travel mode, they need to be held in position with a 'parking brake' mechanism to prevent unintentional movement arising from wind, vibration and gradient induced demands. The required brake type depends on the traveler configuration and each type is described further below.

3. Wheel chocks

For the Side Traveler, electro-hydraulic thruster wheel chocks are used. These are mechanical wedges that are pushed in at the wheel and rail interface, and prevents both the wheels from rotating and slipping along the crane rail (shown right). The wheel chocks automatically engage for safety and require sustained electrical power to release to allow traveler movement. The electro-hydraulic thruster wheel chocks consist of, in general, an electric motor, gearing, wedge spring and mechanical parts contained within a steel thruster housing, a wedge with friction inserts and a steel mounting frame. The wheel chocks are made up of multiple steel components from various sources. There is a limited number of manufactures that fabricate these systems. No manufacturers were



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found that were able to supply Buy America compliant wheel chocks. The proposed manufacturer for wheel chocks is Hillmar Industries, which manufactures the wheel chocks in Canada.

4. Chain stopper

In addition to the wheel chocks at the drive level, the Side Traveler also requires a connection near the bottom of the traveler to the stiffening truss to provide resistance to wind induced forces that attempt to separate the traveler from the stiffening truss. This connection is achieved through a chain stopper system. The chain stopper system includes a stainless steel chain stopper bracket (shown right) that is attached to the traveler frame.



Manufacturers of stopper brackets stated that their products would have Certificates of Origin from outside of America and therefore they are not able to meet the Buy America requirements. No manufacturers were found that were able to supply Buy America compliant chain stopper. The proposed manufacturer for the chain stopper is Lewmar, which manufactures the chain stopper in England.

5. Rail clamps with hydraulic power units

For the Interior Traveler, braking is provided by energized rail clamps that function by gripping the sides of the crane rail and preventing the traveler from rolling along the crane rail. These rail clamps are commonly found on cranes and are hydraulically actuated by an integrated hydraulic power unit (shown right). The rail clamps automatically engage for safety and require sustained power to release to allow traveler movement. The rail clamps generally consist of a mechanical 'vise like' mechanism with rail shoes contained within a steel enclosure. The hydraulic power unit generally

consists of a hydraulic pump with associated values and fittings and an electric pump motor contained within a steel enclosure. These brake systems contain multiple steel parts. Manufacturers of these brake systems indicated that they could not meet Buy America requirements to manufacture such a system because of the international supply chain involved in obtaining various parts. No manufacturers were found that were able to supply Buy America compliant rail clamps with hydraulic power units. The proposed manufacturer for the Crane Rail and Hydraulic Power Unit is Hillmar Industries, which manufactures the rail clamps and power units in Canada.

6. Pneumatic Brakes

The Bottom Traveler is supported from above by a tractor assembly that runs along a trolley beam. This hanging arrangement is less common than the wheel on a crane rail and therefore the Contractor needed to design a bespoke braking system. The designed system is a pneumatic system that utilizes a caliper like mechanism to grip onto the web of the trolley beam member. The brakes automatically engage for safety and require sustained power to release to allow traveler movement. The brake generally consists of a steel pneumatic braking chamber with a large steel spring inside and is similar to those found on large 18 wheel trucks (shown right). Manufacturers of these brakes indicated that they could not meet Buy America requirements to

manufacture such a system because of the international supply chain involved in obtaining various parts. No manufacturers were found that were able to supply Buy America compliant pneumatic brakes. The proposed pneumatic brake manufacturer is TSE Brakes, which manufactures the brakes in Mexico.

7. Air compressors

To power the pneumatic brakes, the Bottom Traveler also requires an electric air compressor integrated with an electric motor mounted to a steel frame. Manufacturers of such electric air compressors indicated that they could not meet Buy America requirements





to manufacture such compressors because of the international supply chain involved in obtaining various parts. No manufacturers were found that were able to supply such Buy America compliant electric air compressors. The proposed manufacturer for the air compressor is Max-Air, which manufactures the air compressors in the United States but cannot supply material traceability documents.

8. Gas cylinder stands

Steel gas cylinder stands are required to store the compressed air for powering the pneumatic brakes of the Bottom Traveler. Manufacturers of gas cylinder stands indicated that they could not meet Buy America requirements to manufacture such cylinder stands because of the international supply chain involved in obtaining various parts. No manufacturers were found that were able to supply Buy America compliant gas cylinder stands. The proposed manufacturer for the gas cylinder stands is USA Safety, which manufactures the gas cylinder stands in the United States but uses material sourced from various origins and cannot guarantee domestically sourced steel.

9. Bearings

The mechanical components of the travelers require various types of different bearings and housings to allow for rotational freedom. The required bearing types, their project application and their proposed manufacturer are as follows:

a. Tapered adapter four bolt pillow block: Housed bearings that allow shafts to rotate even when they are not exactly aligned with the bearing housing and can be bolted to the flange of a beam. They are utilized at the drive and idle shafts on the Interior Traveler. The proposed manufacturer is Timken, which



- b. Pillow block unit setscrew locking: Ball bearing type bearings in a housing that can be set by tightening a setscrew on to the shaft. They are utilized to hold the sheave shaft for the Interior Traveler telescoping mechanism. The proposed manufacturer is Timken, which manufactures in the United States, Mexico and China but cannot supply material traceability documents.
- c. Tapered roller bearings (tapered double outer): Tapered bearings that allow rotation of a shaft but can also resist lateral loading in both directions. They are utilized at the telescoping guide wheels on the Interior Traveler. The proposed manufacturer is Timken, which manufactures in the United States, Mexico and China but cannot supply material traceability documents.







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- d. Sheave bearing 2 rows full complement bearings: Roller sheave bearings with two rows of rollers suitable for higher loads. They are used to hold the sheaves onto the shafts for the Interior Traveler telescoping mechanism. The proposed manufacturer is Nachi-Fujikoshi Corp., which manufactures the items in Japan.
- e. Tapered adapter four bolt square flange block: Bearings that allow shafts to rotate even when they are not exactly aligned with the bearing housing and can be bolted to the face of a plate or beam web. They are utilized for supporting the chain tensioning shaft on the Bottom Traveler drive tractor. The proposed manufacturer is Timken, which manufactures the items in the United States, Mexico and China but cannot supply material traceability documents.
- Spherical plain bearings: Due to the vertical curvature of the f. stiffening truss, in order to evenly distribute the loads from the Bottom Traveler self-weight and operational forces, specialized plain spherical bearings with freedom of movement in all directions are required at the hangers to allow unrestrained movement while carrying a significant load. Such bearings are a critical element of the traveler suspension system and a maintenance-free design is required for reliable

performance. The proposed manufacturer is RBC, which manufactures the items in the United States but cannot supply material traceability documents.

- g. Bushings: The required bushings are maintenance free bearings that allow a single degree of rotation freedom. They typically have a self-lubricating wearing surface with a low coefficient of friction combined with a steel element. They are utilized in the articulating parts of the pneumatic brakes. The proposed manufacturer is Schaeffler Group, which manufactures the items in the United States, Thailand and China but cannot supply material traceability documents.
- h. Radial Ball Bearing Double Seal (Maximum Capacity): These are radial ball bearings with deep groove construction to allow rotation and resist lateral loading. As an example they are used at the Side Traveler skids to hold the rollers. The proposed manufacturer is Timken, which manufactures the items in the United States, Mexico and China but cannot supply material traceability documents.

Manufacturers of the above described bearings indicated they could not meet the Buy America requirements because of international supply chains involved in obtaining various bearing parts. No manufacturers were found that were able to supply Buy America compliant bearings required for this project. Two of the bearing manufacturers, Timken and RBC Bearings Incorporated, are headquartered in the United States. The other











DURALUBE[™] SPHERICAL PLAIN BEARINGS

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proposed bearing vendors, Nachi-Fujikoshi Corp. and Schaeffler Group, are headquartered and manufacture outside of the United States.

The travelers require various cabinets to house and protect the electrical equipment from the corrosive environment. These cabinets require the following products that are manufactured from or include steel elements:

10. Electrical cabinet switches and handles

There are switches and handles mounted to the outer faces of the electric cabinets that allow the operator to control the equipment inside the cabinet. The switches are proprietary switches that are accessory to the inside equipment and are designed to integrate with the inside equipment. Therefore, off-brand or replicated devices will not work.

11. Electrical cabinet shafts

The electrical cabinet shafts connect the face mounted switches and handles noted above to the electrical components within the electrical boxes. The shafts are a proprietary accessory to the inside equipment and are designed to integrate with the inside equipment (length and keyed connection). Therefore, off-brand or replicated devices will not work.

No manufacturers were found that were able to supply Buy America compliant cabinet switches, handles, and shafts compatible with the traveler electrical equipment. The proposed manufacturers are Allen Bradley, which is headquartered in the USA but cannot meet Buy America certification requirements, and ABB, which is headquartered in Switzerland and likewise cannot meet Buy America requirements.

12. Grounding shoes

Grounding shoes are used on the Interior Traveler and Bottom Traveler to ensure an electrical ground to the Bridge structure. This prevents any stray currents passing through the mechanical components such as bearings avoiding premature wear on the rollers, raceways and grease. No manufacturers were found that were able to supply Buy America compliant grounding shoes. The

proposed manufacturer is TransTech, which manufactures these items in the United States but cannot supply material traceability documents.





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13. Scissor lifts

Both the Interior and Bottom Travelers require scissor lifts to enable inspection and maintenance access to areas of the Bridge structure above the traveler platforms. The scissor lifts specified for this project are similar to those used in warehouse facilities and have their own internal battery and electric motor propulsion system allowing it to be driven to different locations along the traveler. The scissor lifts utilize a hydraulic system to raise and lower the platform supported on a retractable frame. Scissor lifts are fully integrated units that in general consist of a wheeled drive chassis that contains the battery, motors, hydraulics and associated electrical equipment. Above the chassis is the steel scissoring section that is integrated with a hydraulic piston and electrical wiring for the platform that can be raised and lowered. The platform also includes electrical controls so the scissor lift can be operated when in the raised position (see right).



For this project, the scissor lifts are constrained to traverse within the Traveler along a defined Scissor Lift Support Rail for proper distribution of weight, safety and functionality purposes (shown right). This, along with geometric constraints imposed by the framing members of the existing Bridge structure to be inspected prevented purchasing of commercially available "off the shelf" scissors lifts. Genie, a



Terex Brand, and JLG Industries, Inc., an Oshkosh Corporation company, were contacted and stated they could not produce scissor lifts that met the performance requirements and also stated that even if they could, they could not provide steel traceability documents for the numerous different steel components necessary to construct a scissor lift in conformance with the Buy America requirements. An American company, Lift-A-Loft, is being proposed to design and construct specialized scissor lifts to meet the project performance requirements. Lift-A-Loft manufactures in the United States, but cannot supply material traceability documents for all of the different steel components in the scissor lift.

The travelers were designed within definitive weight constraints, which were based on the capacity of the existing Bridge structure and requirements to maintain the Federal navigational clearance below the Bridge structure over the Golden Gate Strait and inside the existing envelope of the Bridge. Weight-reduction exercises were conducted earlier in the design of the maintenance travelers and the design has already been optimized to meet the relevant design and safety codes while adhering to the weight restrictions imposed on the design by the existing Bridge structure.

Even though the design has been optimized to minimize the size and weight, the travelers are still substantial pieces of equipment and require a motorized propulsion system. As previously noted, in order to span under the stiffening truss and provide minimum access to the bottom chords and the members of the bottom lateral system, the Bottom Traveler must be approximately 100 feet

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long and 8 feet wide. The Interior Traveler is similar in size. The weight of the travelers were minimized but still ended up weighing in excess of 100,000 pounds. A traveler of this size cannot be manually moved with winches and rollers but must have a substantial propulsion system. In addition, the Bridge and travelers are located in an extremely harsh marine environment and the components must be of a certain quality and design in order for them to be durable and to perform.

Alternative propulsion systems were considered during the design phase. A completely manualdriven system (i.e. human-powered) was considered not practical nor feasible since the size and weight of the travelers would be beyond the capacity of a manual-drive system. Other alternatives to the proposed battery-powered system would not provide any advantage with respect to meeting Buy America compliance. Use of a fuel-powered generator would ultimately drive a similar electric motor/speed reducer system having the same weight and physical envelope constraints as the current design. Additionally, environmental, safety and operating hazards would be increased by use of a local fuel-powered engine.

Note that each of the proposed braking systems are energized, which is beneficial from a health and safety perspective because if a traveler loses power, the brakes will automatically engage and prevent further movement until the power failure has been addressed. Manually operated 'parking brakes' do not offer this safety advantage.

Custom manufacturing of the proposed products is also not feasible. The existing manufacturers that can provide these products have developed these specialty components to be of the highest quality and performance. Even if custom manufacturing were feasible, the reliability of custom components would be untested and could jeopardize the safety of those utilizing the traveler access system. In addition, replacement components would not be readily available in the event of a component failure, and the amount of maintenance would likely increase because of the unknown reliability and life span of such components.

The products listed in this waiver request have a proven track record and are readily available when their replacements or maintenance are required in the future. In addition, these products have been tested in similar applications to prove their reliability in their utilization in the traveler access system. Finally, the identified products are of utmost strength, quality, and durability that are required by the design performance criteria of the traveler access system and, they are covered by the manufacturer's warranty as required by the Contract.

D. Cost of the Waiver Items:

Estimated value for all of the parts subject to this waiver request is \$2,591,491.08. See **Attachment 1** to this letter for additional information on each of the products for which a waiver is being requested.

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E. Country of Origin:

MANUFACTURER	ITEM	COUNTRY OF	COMMENT
	DESCRIPTION	ORIGIN (FINAL ASSEMBLY)	
Toshiba	Electric Motors	USA and Japan	Steel traceability not available
Sumitomo	Speed Reducers	Japan and China	
Hillmar Industries	Wheel Chocks, Rail Clamps and Hydraulic Power units	Canada	
Lewmar	Chain stoppers	England	
TSE Brakes	Pneumatic Brakes	Mexico	
Max-Air	Air Compressors	USA	Steel traceability not available.
USA Safety	Air Cylinder Stands	USA	Steel traceability not available
Timken	Bearings	USA, Mexico and China	Steel traceability not available
RBC	Bearings	USA	Steel traceability not available
Schaeffler Group	Bearings	USA, Thailand and China	Steel traceability not available
Nachi-Fujikoshi Corp	Bearings	Japan	
ABB	Electrical Cabinet Switches and Handles and Shafts	Estonia and China	
Allen Bradley	Electrical Cabinet Shafts	USA, Mexico, Switzerland, Canada, China and others (Rockwell Automation)	Steel traceability not available
TransTech	Grounding Shoe	USA	Steel traceability not available
Lift-A-Lot	Scissor Lifts	USA	Steel traceability not available

F. Availability of Domestically Manufactured Product:

There are no domestic manufacturers that make these products that meet the Buy America requirements. Both the Contractor and the District contacted numerous manufacturers of the products included in this waiver request. The Contractor initially contacted major manufacturers

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of these products to determine if their products complied with the Buy America provisions. Subsequent to these contacts, the Contractor had discussions with distributors who represent many manufacturers in an attempt to locate other potential manufacturers. The District and its consultants conducted an independent search for these products, contacting smaller but reputable manufacturers with whom they have previously worked, in an effort to locate Buy America compliant products. Neither the Contractor nor the District nor the District's consultants were able to locate any domestic manufacturers or fabricators of the above listed products that were able to provide Buy America compliant products that satisfy the Contract's traveler access system design criteria. Please see the last column of the table in **Attachment 1** to this letter for the record of searches for manufacturers performed by the Contractor, the District and the District's consultants.

G. Redesign Using Alternate or Domestic Product:

The traveler access system has been designed to fit on and within the physical constraints of the existing Bridge structure. The components included in the traveler access system are required for the system to function and cannot be revised or eliminated. There are no alternate domestic products that can meet the Buy America certification requirements that may be substituted for the products listed in this waiver request. The Contractor and District were unable to locate domestic manufacturers for the products that are listed in this waiver request that can certify that their products comply with the Buy America requirements.

As noted above, alternative propulsion systems were considered during the design phase. .A completely manual-driven system (i.e. human-powered) was considered not practical nor feasible since the size and weight of such a traveler would be beyond the capacity of a manual-drive system. Other alternatives to the proposed battery-powered system would not provide any advantage with respect to meeting Buy America compliance. Use of a fuel-powered generator would ultimately drive a similar electric motor/speed reducer system having the same weight and physical envelope constraints as the current design. Additionally, environmental, safety and operating hazards would be increased by use of a local fuel-powered engine.

Custom manufacturing of the proposed products is also not feasible. The manufacturers that make these products have developed them to be of the highest quality and performance using international supply chains to obtain various parts.

H. Waiver Request:

The traveler access system is a critical part of this Project and delays in procuring the products listed in this waiver request will have an impact on the fabrication and installation of the system and on the operations at the Bridge. Without this traveler access system, the District will not be able to perform critical inspections of the Golden Gate Bridge Suspension Bridge and readily maintain the Bridge in a state of good repair. The products described in this letter and included in the attachment are needed to complete the traveler access system and the Project. These products are highly specialized products. Based on an extensive but unsuccessful search for manufacturers of such products that could certify these products' compliance with the Buy America requirements,

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the District has determined that there are no manufacturers of these products that can comply with the Buy America requirements.

Time is of the essence with regard to this request. Any delay to acquiring the products would be contrary to the public interest, as just last year nearly 200 people came to the Golden Gate Bridge to commit suicide, and while the vast majority were stopped and taken for medical treatment, sadly 28 people died by jumping from the Bridge.

The District respectfully requests that the FHWA grant a waiver to the Buy America Act requirements pursuant to 23 CFR 635.410.

We would be grateful for any action taken to expedite your determination. Please do not hesitate to contact me if you have any questions or if you would like to discuss this request in further detail.

Sincerely,

Hauertavbush

Ewa Bauer-Furbush, P.E. District Chief Engineer

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Attachment 1

cc: Tony Tavares, District 4 Director - Caltrans
 Louis Schuman, SB-1, Discretionary Manager, GGBHTD, BART - Caltrans District 4
 Local Assistance
 Matthew Schmitz, Director, Project Delivery - FHWA
 Omar Qudus, Project Oversight Manager - FHWA
 Robert Smith, Resident Engineer - GGBHTD
 Chuck Voong, Supervising Civil Engineer - GGBHTD
 John Eberle, Deputy District Engineer - GGBHTD
 Julie Sherman, Esg. - Hanson Bridgett